

Response Under 37 C.F.R. §1.111
Application No. 10/718,653
Attorney Docket No. 032131

REMARKS

Claims 1-18 are pending in the present application. Claims 4-14 and 16-17 have been withdrawn from consideration.

Applicants' Response to the Claim Rejections under 35 U.S.C. §103(a)

Claims 1-3 are rejected under 35 U.S.C. §103(a) as being unpatentable over Nagatomi et al. (JP 54124968 and the abstract) in view of either one of Inada et al. (JP 06104317 and the abstract) or Shoffner (U.S. Patent 3,749,621), Da Costa (U.S. Patent 3,040,489), either one of Tsunashima et al. (U.S. Patent 5,051,475) or Homma et al. (U.S. Patent 5,336,703), and optionally Pool (U.S. Patent 3,501,128). Further, Claim 15 is rejected under 35 U.S.C. §103(a) as being unpatentable over Nagatomi et al. either one of Inada et al. or Shoffner, Da Costa, either one of Tsunashima et al. or Homma et al., and optionally Pool as applied to claims 1-3 above, and further, in view of the admitted prior art (Specification pages 1-3). Applicants respectfully traverse. Specifically, applicants respectfully submit that there is no motivation which would lead the skilled artisan to use the pressing load of 10-20N with a roller having a diameter of 20 to 50mm as set forth in claims 1 and 15 based on the teachings of Tsunashima and Homma.

Tsunashima and Homma are cited for their teaching of pressure force applied to films for lamination. Both are generic references that do not teach or discuss semiconductor wafer dicing. Tsunashima is directed to a polyester film. The Office cites to the reference's generic disclosure of pressing tape with a hand roller with a force of about 5kg. Col. 8, lines 40-43. Homma is directed to a resin/polymer curable composition and also states that lamination was performed

using a hand roller and about 5kg of force. Col. 13, lines 40-44. The Office maintains that these references illustrate that it is obvious in the art to apply necessary force in the process of lamination, and that a skilled artisan would readily ascertain that proper amount of force to apply during the lamination process based on the combination of Nagatomi and Inada/Shoffner. In short, the Office maintains that the limitation directed to the application of force is a matter of routine experimentation.

Under U.S. patent law there must be a teaching or suggestion to motivate one of skill in the art to combine the references to reach the claimed invention. The present invention is based on the discovery of an appropriate condition of lamination process of a die-attachment film. Since the die attachment film is very thin, it is difficult to uniformly laminate the die-attachment film without bubbles and wrinkles. The applicants discovered the appropriate condition for achieving a good-quality lamination film of the die-attachment film. The condition includes a heated roller, an elastic layer on the outer surface of the roller, an appropriate range of the roller diameter and an appropriate range of a pressing force applied to the film.

Applicants respectfully submit that there is no teaching or suggestion within the cited references to apply the range of the pressing force as suggested in either one of Tsunashima and Homma applied to the roller having a diameter of a range of 20 to 50mm. Neither, Tsunashima, nor Homma teach or suggest a relationship between the range of the roller diameter and the pressing force applied by the roller, nor do the references teach or suggest force application for a roller for semiconductor dicing. Further, the primary reference, Nagatomi, teaches a hand roller

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with no specific requirement for force applied by hand. Hence, applicants respectfully submit that there is no motivation to use the pressing force indicated in the references to the roller having a diameter ranging from 20 to 50mm for use on a semiconductor wafer, such as that taught by Nagatomi.

In view of the above remarks, Applicants submit that the claims, as previously presented, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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